

## **Metamaterials from microwave to THz and beyond**

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Metamaterials comprised of electrically conducting elements such as Split Ring Resonators (SRRs) have been shown to exhibit extraordinary electromagnetic properties including Left Handed (LH) behavior and negative refraction, and offer a range of response that is either difficult or impossible to obtain in naturally occurring materials and composites. The exotic behavior of metamaterials has prompted unprecedented research by a worldwide community of physicists, material scientists and engineers. I will give an introduction to LHM and describe experimental results from microwave to THz frequencies, and describe the possible extension of these materials to mid and near infrared frequencies.